



Keeping Greenwich Moving:

Greenwich Council's Draft
Second Local Implementation Plan
for Transportation

December 2010

Contents	Page
Foreword from Councillor Denise Hyland	4
1 Executive Summary	6
2 Introduction	
2.1 Background	17
2.2 Local Implementation Plan Development	19
2.3 Strategic Aim and Objectives	20
2.4 Policy Influences	21
2.5 Local Implementation Plan Structure	24
3 Borough Context	
3.1 Geography and Topography	25
3.2 Air Quality	27
3.3 Town Centres	27
3.4 Demographics	28
3.5 Land Use	33
3.6 Travel Demand	34
3.7 Public Transport	37
3.8 Smarter Travel	44
3.9 Cars and Roads	53
3.10 Freight	56
3.11 Future Major Schemes	57
4 Our Objectives and their Delivery	
4.1 Strengths, Weaknesses, Opportunities and Threats	62
4.2 Local Challenges and Opportunities	64
4.3 Supporting Economic Development and Population Growth	64
4.4 Enhancing Quality of Life	70
4.5 Improving Safety	76
4.6 Improving Transport Opportunities	80
4.7 Reducing Transport's Contribution to Climate Change	83
4.8 Supporting the delivery and legacy of the Olympics and Paralympics	84
4.9 Funding and Delivery of Our Plans	88
4.10 The LIP Investment Programme	88
4.11 Developing Our Investment Programme	91
4.12 Managing the Risk	92
4.13 Borough Partnerships	93
5 Monitoring Our Performance	
5.1 Introduction	94
5.2 Indicators, Targets and Monitoring	94
5.3 Targets	95
5.4 Mode Share	97

5.5	Bus Service Reliability	103
5.6	Asset Condition	106
5.7	Road Safety	108
5.8	CO ₂ Reduction	112
5.9	Performance Management	115
Glossary		116
Appendices		
A	Strategic Environmental Assessment Scoping Report	125
B	Equality Impact Assessment	188
C	Evidence Base	201
D	Local Implementation Plan Funding Programme	203
Figures		
Figure 2.1	Policy influences	22
Figure 3.1	London's boroughs map	25
Figure 3.2	Flood risk zones	26
Figure 3.3	London Wide Indices of Multiple Deprivation	30
Figure 3.4	The Olympic and Paralympic legacy	32
Figure 3.5	Opportunity areas	34
Figure 3.6	Greenwich PTAL ratings	37
Figure 3.7	Bus routes	41
Figure 3.8	River bus map	42
Figure 3.9	Woolwich interchange	43
Figure 3.10	Woolwich interchange	44
Figure 3.11	Greenwich cycle map	47
Figure 3.12	Walking routes	48
Figure 3.13	Car club vehicle locations	49
Figure 3.14	Greenwich car ownership	53
Figure 3.15	Projected car ownership growth	54
Figure 3.16	Freight flows	56
Figure 3.17	Crossrail route	57
Figure 3.18	Cycle superhighways	58
Figure 3.19	TfL River Crossing Study Areas	60
Figure 4.1	SWOT model	63
Figure 4.2	ATOS scores	80
Figure 4.3	Eastern region challenges and opportunities	87
Figure 5.1	Performance measuring cycle	94

Tables

Table 1.1	MTS2 Goals, Challenges and Outcomes	14
Table 2.1	Development Timeframe	19
Table 3.1	Indices of Multiple Deprivation (London Borough Rankings)	29
Table 3.2	Travel Patterns in Greenwich	35
Table 3.3	Trip Generators in Greenwich	35
Table 3.4	Summary of Borough Transport	38
Table 3.5	Mainline Rail: Greenwich passenger numbers	39
Table 3.6	DLR: Greenwich passenger numbers	40
Table 3.7	Cycle Training 2009/10	46
Table 3.8	Network Rail: Funded works	59
Table 4.1	Supporting population and employment growth	64
Table 4.2	Improving connectivity	67
Table 4.3	Efficient and effective transport systems	68
Table 4.4	Improving Journey Experience	70
Table 4.5	Enhancing the environment	71
Table 4.6	Improving air quality	72
Table 4.7	Improving noise impacts	72
Table 4.8	Improving health impacts	73
Table 4.9	Reducing crime and the fear of crime	73
Table 4.10	Improving road safety	78
Table 4.11	Improving public transport safety	79
Table 4.12	Improving accessibility	80
Table 4.13	Supporting regeneration	81
Table 4.14	Reducing climate change/resilience	83
Table 4.15	Adaption for climate change	83
Table 4.16	Olympic and Paralympic legacy	84
Table 4.17	Strategy and objective correlation	85
Table 4.18	Overview of spending plan	90
Table 5.1	Core Indicators for monitoring delivery of LIP outcomes	96
Table 5.2	Local Indicators for monitoring delivery of LIP outcomes	96
Table 5.3	Modeshare Targets	97

Foreword

Despite these economically challenging times, Greenwich Council is committed to delivering benefits to, and creating a lasting legacy for, our residents and visitors. Our long-term aim is to make Greenwich a great place to live, work, learn and visit; a leading borough in London in terms of growing prosperity, health, education, employment, skills, the environment, culture and social cohesion. The provision of an affordable, sustainable and accessible transport system is a primary enabler of these objectives.

Clearly, there are problems which need to be tackled citywide to help us realise our ambitions, but we can use our influence to shape our own future, as we are best placed to know what we need locally using our local knowledge and perspective. In addition to looking at a strategic vision for the future of transport affecting Greenwich, this plan outlines a programme of schemes to develop and initiate local improvements.

Across the Borough there are visible and very positive signs of change following the introduction of major new transport projects. The Woolwich DLR extension opened in January 2009, and in its first year of operation carried 5 million passengers to and from Woolwich Arsenal. In 2010 Network Rail, on behalf of Crossrail Ltd., started work preparing the site at Plumstead for the launch of the tunnel-boring machine that will create two new tunnels under the Thames. The scheme is fully funded and the south-eastern route to Abbey Wood and Woolwich is scheduled for delivery as part of the Crossrail central phase, for completion in 2018.

The upgrade of the DLR network to allow 3 car trains is now complete. Ongoing signalling improvements to the Jubilee Line will add 30% capacity and give faster running times, and although the work is taking longer than scheduled it is due to be finished in 2011.

We have the added, and exciting, challenge of being a host borough for the 2012 Olympic and Paralympic Games, with 3 sites in Greenwich; at North Greenwich on the Peninsula, Woolwich Artillery Barracks and Greenwich Park. We are working in partnership with TfL and the Olympic organisations in order to manage transportation effectively and efficiently, both at Games time and in the future, providing a transport legacy and greater opportunities for people in the Borough.

However, there is still a need for major investment to develop the transport infrastructure required to support the population growth predicted for Greenwich over the next 20 years.

Public Transport north-south links in the Borough remain in need of focused improvements, linking residents in areas served by limited transport options to existing and planned interchanges and transport hubs, and maximising the benefits brought by such new infrastructure.

The Thames still acts as a major barrier to travel, and due to the lack of vehicle crossings in south east London and the Thames Gateway, the Blackwall Tunnel and Woolwich Ferry are the major attractors to vehicles and the biggest cause of local congestion. We are

continuing to lobby TfL for a package of additional river crossings to alleviate existing congestion and provide capacity for future growth.

Whilst the Council fully acknowledges the need for the use of private vehicles, there is a clear necessity to reduce traffic congestion and the resultant pollution, but in order to do this we must be able to offer and promote truly viable alternatives. The schemes and proposals in this plan aim to work towards this aspiration.

Denise Hyland

Councillor Denise Hyland
Cabinet Member for Regeneration Enterprise and Skills
Greenwich Council



I. Executive Summary

This document represents the Council's Second Local Implementation Plan (LIP2), and replaces the first LIP which was adopted in 2007. It sets out the proposals considered appropriate for implementation of the May 2010 Mayor's Transport Strategy (MTS) and the Eastern sub-regional plan and like the MTS looks forward to 2031. The LIP2 has been produced in accordance with the 1999 Greater London Authority (GLA) Act, which requires each borough to prepare a LIP. The document has been prepared in line with the LIP Guidance published by Transport for London (TfL) in May 2010.

Second Round LIPs become effective from April 2011, subject to agreement by the Council's Elected Members and the Mayor of London. The LIP2 contains the Borough's transport objectives which provide the context for, and helps to establish, the Delivery Plan and the Performance Monitoring Plan which can be found in later sections. The formulation of the LIP's local objectives, are based on evidence gathered from an assessment of local circumstances as well as other contributory factors.

The Delivery Plan, covering the period 2011 to 2014 identifies the proposed Programme of Investment and the Performance Monitoring Plan includes a range of targets which will be used to assess progress. Five of the targets, are core targets, as determined by Transport for London. A high level timetable for delivery is included.

Funding and delivery of the Local Implementation Plan will be dependent on partnership working with a number of stakeholders including Transport for London, neighbouring boroughs, transport operators, developers and other stakeholders.

Structure of the Borough's Local Implementation Plan

The second round LIP consists of five chapters, which are summarised as follows:

Chapter 2 Introduction

This chapter provides information about the context for the Local Implementation Plan and refers to its key influences. The Plan's development is based on the assessment of local needs and aspirations and the wider strategic context. Planning to meet these diverse and sometimes conflicting needs means that the effective coordination and strategic prioritisation of goals is essential.

Aim and Objectives of the Second Local Implementation Plan

The following aim and local objectives have been developed as the Plan's strategic goals, and were agreed in principle by the Council's Highways Committee on 22nd September 2010.

The aim of the Local Implementation Plan's programme is to:

- 1. Increase sustainable travel capacity and opportunities for trips to and from key growth and employment centres within the Borough, and ensure the network enables all residents and visitors to access health, education***

(including 16+ establishments), employment, social and leisure facilities within and beyond the borough of Greenwich.

The more detailed local objectives which will deliver the aim are to:

2. Improve the condition of principal roads (to sit within the top quartile of London roads).
3. Improve the health of residents by promoting Active Travel - increasing walking and cycling.
4. Increase walking, cycling and public transport access by reducing crime, fear of crime and antisocial behaviour through well designed, high quality and historically sensitive public realm improvements.
5. Reduce the number of people killed and seriously injured on the Borough's roads, and reduce the overall number of pedestrian and cycle casualties.
6. Improve access to the Borough's three Olympic and Paralympic sites and develop the legacy this provides for the Borough, including improvements to walking and cycling facilities as well as access to public transport.
7. Improve transport provision and the quality of the transport environment particularly in areas that show high indices of multiple deprivation.
8. Reduce Greenwich's contribution to climate change and work to improve the Borough's air quality. (Reduce transport-related CO₂ emissions, tackle congestion, smooth traffic flow and increase the proportion of trips made by sustainable modes).
9. Continue to promote and support a package of Thames River Crossings (including the development of a fixed crossing at Gallions Reach) and the further development of passenger River Services, to improve access to key employment areas and address severance in the East of the Borough and intensification of river use overall.
10. Implement Crossrail complementary measures to allow better access to already committed infrastructure.
11. Work towards the implementation of express bus routes both in and beyond the Borough to improve orbital links and journey times for public transport users in the Borough.
12. Improve North/South public transport links within the Borough including the investigation of extending Docklands Light Railway services to Kidbrooke and Eltham and beyond.

The LIP2 also gives the Council the opportunity to identify how it can work locally to deliver the London wide goals contained in the Mayor's Transport Strategy of:

1. Supporting economic development and population growth;
2. Enhancing the quality of life for all Londoners;
3. Improving the safety and security of all Londoners;
4. Improving transport opportunities for all Londoners; and
5. Reducing transport's contribution to climate change and improving its resilience.
6. Supporting the delivery of the 2012 Olympic and Paralympic games and their legacy

Policy context

In developing the LIP2 objectives, consideration has been given to the relationship of strategic issues between central, regional, sub-regional and local government. There are a number of policies and legislative documents that have been important factors in developing this document. The MTS and the London Plan (The Mayor's Spatial Development Strategy) have been considered in parallel with regional aspirations. At the local level, the emerging Local Development Framework, with particular reference to the Borough's draft Core Strategy and the Greenwich Strategy have helped to shape the strategic development of this document.

The Mayor's London Plan and Economic Development Strategy have identified major development opportunities within Greenwich and the Thames Gateway Area. Four opportunity areas (Thamesmead and Abbey Wood, Woolwich, Charlton Riverside and Greenwich Peninsula) are identified in the Mayor's draft London Plan. Kidbrooke has been identified as an Intensification Area. These proposals indicate the long term importance of Greenwich to the Mayor of London's spatial aspirations, particularly as a provisional housing target has been set for the Borough, of just over 20,000 additional homes from 2007/08 to 2016/17.

Statutory Requirements

There are a number of statutory duties which the Council has complied with in developing the Local Implementation Plan and which have informed the development of the LIP2's objectives. The following can be found as appendices to this plan.

- (1) The Strategic Environmental Assessment (SEA)
- (2) Equalities Impact Assessment (EQIA) which includes due regard to the Borough's Disability Equality Duty.

Other statutory duties which have determined the LIP objectives include:

- (3) Traffic Management Act (2004), which aims to provide better travelling conditions for all road users. A key objective is to ensure that road and street works are properly planned and co-ordinated. Accordance with the Network Management Duty has been followed.

Chapter 3 Local Context

This chapter explores the predicted population growth figures which will have a significant effect on transport use in the Borough. Transport provision and service must be suitable to meet the housing and employment requirements of residents and visitors. By 2027 the population of the Borough is expected to have grown to 288,000, an increase of approximately 53,000 or 22.6% since 2010.

Understanding the needs of people in this Borough is of vital importance in delivering a successful, meaningful strategy. Transport provision and service must be suitable to meet the housing, education, employment and social requirements of the existing and growing population, as well as providing links to vital health facilities.

Spatially, the Borough is mostly residential with housing comprising the largest land use; covering approximately 35% of the total area. The Borough's main town centres are Eltham, Woolwich and Greenwich. Woolwich and Eltham are designated Major Centres and the Borough's largest and second shopping and office employment areas respectively. These town centres play a pivotal role in creating economic opportunities and providing a base for jobs and services. Greenwich has high levels of deprivation and ranks as the 24th most deprived local authority in England and the 8th most deprived borough in London. Experiences of deprivation are felt differently across the borough, reflecting diverse needs; but which can also impact on how people choose to travel. Linking the LIP2 to other policies enables the Borough to reduce disparities.

People's choices of how to travel, and planning decisions can be affected by the natural characteristics of the Borough. Due to its river frontage and areas of low lying land, Greenwich has areas of land categorised as being at risk of flood; flood risk remains an important consideration for all developments. Given that traffic emissions are a major contributory factor to poor air quality, the Council is committed to improving Air Quality and is at the forefront of Air Quality control. Improvement programmes are focused on controlling vehicle emissions at source; minimising vehicle use and encouraging the uptake of cleaner fuels and vehicles.

Transport Context

Chapter 3 also includes information about the specific modes available in the Borough. Travel patterns vary considerably between different parts of Greenwich, reflecting its geography, and the existing provision of transport networks. Between 2006 and 2009 approximately 54% of trips made by Greenwich residents were by non-car modes (public transport, walking and cycling). The 2001 Census indicated that 41% of households do not have access to a car or van however this figure disguises significant differences between areas, with wards to the north of the Borough having high rates of car and van non-availability (55% in Woolwich Riverside, 51% in Woolwich Common) compared to 27% in Coldharbour and New Eltham (the most southerly part of the Borough).

Due to the more limited public transport infrastructure in the south of the Borough, the car remains the most used mode. Public transport is the main mode used when travelling in the north of the Borough.

A lack of cross river linkages continues to be an important issue. Non-car owners are able to cross the river through a variety of ways such as the Greenwich and Woolwich foot tunnels, the Thames Clipper River Service, a bus service at the Blackwall Tunnel, the Jubilee Line at North Greenwich and the two Docklands Light Rail extensions. The Crossrail Development will be a further addition, with completion of the central section due by 2018. TfL have recognised the need to improve the linkages for motor vehicles and are investigating a range of options. However, the cross river road network between Rotherhithe tunnel and the Dartford crossing is currently limited to the Woolwich Ferry and the Blackwall Tunnel. These act as primary attractors to through traffic in the Borough and cause of both congestion and poor air quality locally.

Public transport provision is essential for travel to work and services for a large proportion of the population. The Borough has three heavy rail lines running through it, which form a series of radial links for the Borough between Kent and Central London. Docklands Light Railway has two lines running through Greenwich; the Lewisham Line and the Woolwich Extension. Bus services are well established that run on local and strategic routes. The Greenwich Peninsula has the Borough's only underground station, on the Jubilee Line at North Greenwich.

Smarter Travel

Smarter Travel measures are used to influence people's travel behaviour to favour more sustainable modes such as cycling, walking, increased use of public transport and car clubs. Encouraging the greater use of sustainable modes can have positive impacts across a number of cross cutting areas including health, environment and safety. The range of programmes and interventions employed to reduce demand for the car include Travel Awareness campaigns and school and workplace travel plans.

Travel by sustainable modes is regarded as an important way of travelling, particularly for local trips. The Greenwich cycle network has been established over a number of years. Two of the best used routes include National Cycle Network route 1 and 4 (The Thames Cycle Route). Cycle Training continues to provide a variety of services to promote cycling in the Borough including delivery of Bikeability training, which is designed to provide cyclists the skills and confidence to ride their bikes on today's roads.

Walking is promoted as a free, functional and reliable method of getting round the Borough. It is now widely acknowledged that walking can contribute towards providing wider health and environmental benefits.

As an Olympic host borough Greenwich will look to benefit from the long term legacy of the Games. It is particularly important for the Borough to ensure the opportunities to enhance health and wellbeing by increasing Active Travel (cycling and walking) are maximised.

Physical measure to improve the walking and cycling networks will be delivered prior to 2012 and will form permanent enhancements to the walking and cycling networks. Schemes to improve access for pedestrians and cyclists to the Borough's three Olympic and

Paralympic venues – Greenwich Park, North Greenwich Arena and Woolwich Barracks – will provide a lasting benefit for both visitors and residents in Greenwich.

Working in partnership with the Primary Care Trust, Greenwich Council will continue to actively promote cycling and walking through a variety of methods including travel plans, school travel plans and cycle training for both children and adults, and by working towards implementing the outcomes identified by stakeholders as part of the 2010/11 Best Value Review into improving cycling capacity and facilities in the Borough.

Car Use

Private vehicle use in the Borough is high and forecast to grow, both for residents in areas of the Borough with limited public transport options, and for through traffic using the Borough's two river crossings. Forecasts for the East sub region show that there will be a substantial increase in the number of car trips together with road based freight and distribution.

Congestion on the network is caused by a variety of issues including the increasing volume of traffic, accidents, road works and the need for access to services by utilities companies. The speed and volume of traffic can inhibit pedestrians and cyclists using and crossing these roads. Existing bottlenecks in the Borough, including Greenwich Town Centre, Blackwall Tunnel and Woolwich Ferry approaches and the A20 between Eltham and Lee are identified as congestion hotspots.

Smoothing traffic flow through a variety of methods including the good management of on street works and parking management and enforcement is necessary. To manage the increasing demand for road space in Greenwich, a Borough Traffic Manager has been appointed, (as required by the Traffic Management Act [2004]) to enhance the current enforcement role carried out under the New Roads and Street Works Act, 1991.

Future Committed and Funded Schemes

TfL's current Business Plan has taken this into account in preparing the Borough's transport objectives and the Delivery Plan, these include:

- Constructing Crossrail, which will increase London's rail network capacity by 10 per cent, cutting journey times substantially and relieving congestion on many other rail and Tube lines.
- Network rail capacity upgrades; platform lengthening will allow the operation of 12 car trains in the south-east.
- The Blackwall Tunnel Northbound Refurbishment is due to be completed by 2012. The refurbishment includes new safety, lighting and communications systems.
- Woolwich Town Centre – Changes have already been delivered such as the ongoing redevelopment of the Royal Arsenal and the Love Lane sites. The opening of the Woolwich DLR extension in 2009 and Crossrail in 2018 bring major new

infrastructure advantages to the area. Existing infrastructure has been developed to best effect and these changes have seen significant improvements to the public realm.

- Cycle superhighways. Two are currently scheduled to be delivered affecting Greenwich by 2015.
- A Cable Car from Greenwich Peninsula to the Royal Docks for pedestrians and cycles (achieved with private sector funding, potentially underwritten by TfL)

The following London wide commitments will also affect Greenwich.

- Continued investment in smarter travel measures, aimed at changing public attitudes and behaviour.
- Initiatives to promote walking and cycling, improve the public realm and where appropriate, promoting shared use of road space.

Future Unfunded Schemes

While welcomed in principle by the Council none of these schemes have a funding commitment, or form part of the TfL Business Plan, which sets out the TfL spending programme to 2018

- Thames River Crossings

Increasing demand for travel in South East London and development across the Thames Gateway must be accommodated.

Current schemes which TfL are investigating include:

1. A vehicle tunnel from the A102 on Greenwich Peninsula to Silvertown,
2. Improvements to the Woolwich Ferry,
3. A vehicle ferry at Gallions Reach,
4. A fixed link (bridge or tunnel) at Gallions Reach.

- Extensions to Thames river passenger services

Although some funded measures for passenger river services are included in the TfL business plan, it does not commit to funding the extension of river services east of Woolwich into the Thames Gateway

- North South 'Fixed Links'

Greenwich is bus reliant for public transport links between the north and south of the Borough. The Council has been undertaking feasibility studies of schemes such as light rail extensions between the north and south of the Borough (linking North Greenwich, Kidbrooke, Eltham and beyond).

While, in the current economic climate, these may be considered prohibitively expensive by TfL, their importance in the long term capacity planning should mean they are acknowledged in the Mayoral and TfL long term strategies; currently the Council is

continuing to stress the importance for interim measures, such as rapid bus links, to be implemented to test their demand.

- **Mitigation Measures for the Cancellation of Greenwich Waterfront Transit (GWT)**
GWT was a bus based rapid transit system, which was designed by TfL to link the transport hubs of Abbey Wood and North Greenwich via Thamesmead, Woolwich and Charlton. The scheme was scheduled to be delivered by TfL in time for the 2012 Olympics. In 2009 the Mayor of London cancelled the funding for the scheme and has subsequently removed it from the Draft London and Business Plans. The Council is continuing to work with both TfL and new developments to try and secure commitment to the provision of a rapid bus service which mitigates in part for GWT.

Chapter 4 Objectives and Delivery

This section sets out Greenwich's transport aspirations and proposals to accomplish these. The Borough objectives, listed earlier, have been developed through an assessment of the local context and remain in line with the six MTS goals. Within the MTS, sixteen challenges stemming from the overarching MTS goals have been identified (Table 1.1). In LIP2 these challenges have been looked at from the local perspective. Examples of how the local challenges will be dealt with are also included. It should be noted that these examples are not exhaustive. Additional detailed information of specific proposals and interventions can be found in Appendix D, the LIP funding programme.

Funding and Delivery

The Delivery Plan provides proposals for a three year Programme of Investment and includes details of how the LIP2 implementation will be monitored. It has been prepared to identify how we will achieve our LIP2 objectives. This covers the period 2011/12 to 2013/14 and is consistent with the Borough's three year funding allocation, announced in 2010

Table 1.1: MTS2 Goals, Challenges and Outcomes

Goals	Challenges	Outcomes
Support economic development and population growth	Supporting sustainable population and employment growth	<ul style="list-style-type: none"> • Balancing capacity and demand for travel through increasing public transport capacity and/or reducing the need to travel
	Improving transport connectivity	<ul style="list-style-type: none"> • Improving people's access to jobs • Improving access to commercial markets for freight movements and business travel, supporting the needs of business to grow
	Delivering an efficient and effective transport system for people and goods	<ul style="list-style-type: none"> • Smoothing traffic flow (managing delay, improving journey time reliability and resilience) • Improving public transport reliability • Reducing operating costs • Bringing and maintaining all assets to a state of good repair • Enhancing use of the Thames for people and goods
Enhance the quality of life for all Londoners	Improving journey experience	<ul style="list-style-type: none"> • Improving public transport customer satisfaction • Improving road user satisfaction (drivers, pedestrians, cyclists) • Reducing public transport crowding
	Enhancing the built and natural environment	<ul style="list-style-type: none"> • Enhancing streetscapes, improving the perception of the urban realm and developing 'better streets' initiatives • Protecting and enhancing the natural environment
	Improving air quality	<ul style="list-style-type: none"> • Reducing air pollutant emissions from ground-based transport, contributing to EU air quality targets
	Improving noise impacts	<ul style="list-style-type: none"> • Improving perceptions and reducing impacts of noise
	Improving health impacts	<ul style="list-style-type: none"> • Facilitating an increase in walking and cycling
Improve the safety and security of all Londoners	Reducing crime, fear of crime and antisocial behaviour	<ul style="list-style-type: none"> • Reducing crime rates (and improving perceptions of personal safety and security)
	Improving road safety	<ul style="list-style-type: none"> • Reducing the numbers of road traffic casualties
	Improving public transport safety	<ul style="list-style-type: none"> • Reducing casualties on public transport networks
Improve transport opportunities for all Londoners	Improving accessibility	<ul style="list-style-type: none"> • Improving the physical accessibility of the transport system • Improving access to services
	Supporting regeneration and tackling deprivation	<ul style="list-style-type: none"> • Supporting wider regeneration
Reduce transport's contribution to climate change and improve its resilience	Reducing CO2 emissions	<ul style="list-style-type: none"> • Reducing CO2 emissions from ground-based transport, contributing to a London-wide 60 per cent reduction by 2025
	Adapting to climate change	<ul style="list-style-type: none"> • Maintaining the reliability of transport networks
Support delivery of the London 2012 Olympic and Paralympic Games and its legacy	Developing and implementing a viable and sustainable legacy for the 2012 Games	<ul style="list-style-type: none"> • Supporting regeneration and convergence of social and economic outcomes between the five Olympic boroughs and the rest of London • Physical transport legacy • Behavioural transport legacy

Programme of Investment

A costed and funded high level Programme of Investment, covering the period 2011/12 to 2013/14 is included. In developing the Programme of Investment, the Council has identified delivery actions which address the delivery requirements identified for each of the Mayor's Transport Strategy goals. To ensure that investment is targeted, a careful review of existing evidence has been undertaken, prioritising investment in programme areas where there is clear evidence to suggest that intended outcomes will be delivered and will make a significant contribution to our Greenwich's LIP2 objectives.

Funding for the programme of works comes from a number of sources including:

- TfL funding

The indicative funding allocations for Greenwich's three year Programme of Investment was provided by TfL in May 2010, this identifies measures which are to be wholly or partly funded through the LIP allocation process by TfL. The Delivery Plan includes a high level timetable for implementation of proposed measures and will be 'refreshed' at least every three years.

- Central Government funding

Such as the Community Infrastructure Fund grant, which is currently being used to refurbish the Greenwich and Woolwich Foot Tunnels)

- Developer Contributions, Section 106 funding/CIL

These include examples such as contributions to the funding of Crossrail, and the new pier for passenger river services on the western side of Greenwich Peninsula which forms part of the current Cruise Liner development

- Greenwich Council revenue funding

The indicative funding allocations for Greenwich's three year Programme of Investment was provided by TfL in May 2010. The proposed spend for 2011/12, 2012/13 and 2013/14 following this is detailed below.

1) Maintenance

Maintenance programmes – bridge strengthening and assessment, principal road renewal.

Total £3,200,000 projected spend for period 2011 to 2014

2) Corridors and Neighbourhoods

Bus stop accessibility, the London Cycle Network Plus, cycling, walking, local safety schemes, 20 mph zones, freight, regeneration, environment, accessibility and controlled parking zones.

Also included is cycle parking, Cycle Networks, shared space, reduction of clutter and electric vehicle charging points.

Total £5,141,000 projected spend for period 2011 to 2014

3) Smarter Travel

Smarter Travel programmes including School and Workplace Travel Plans, travel awareness, education, training and publicity.

Total £926,000 projected spend for period 2011 to 2014

4) Major Schemes

Major Schemes are classed as those interventions costing more than £1m over the entire life of the project. Under this category there is a total of £550,000 projected spend for completion of Woolwich Town Centre Interchange for period 2011/12

Additionally a total £2, 516,000 is shown in the spending plan for completion of the proposed Greenwich Town Centre Predestination Scheme

Over the period there is also £270,000 available for Borough allocated funding.

The indicative programme of investment identifies measures which are to be wholly or partly funded through the LIP2 allocation process by TfL.

The Delivery Plan includes a high level timetable for implementation of proposed measures and will be 'refreshed' at least every three years.

Following the October 2010 Comprehensive Spending Review, on 4th November TfL announced further changes to the funding allocation. In the revised allocation the two separate Corridors and Neighbourhoods and Smarter Travel budget allocations were combined into a Corridors, Neighbourhoods and Smarter Travel package; Greenwich Council received a reduction in allocation of £136,000.

Chapter 5 Monitoring our Performance

The success of the Local Implementation Plan will be judged based upon delivery of a range of indicators and locally specific targets. Five mandatory indicators relating to mode-share, bus service reliability, asset condition, road traffic casualties and CO₂ emissions have been set. The rationale for selecting the target figure has been based on collection and analyses of robust evidence including assessing previous performance, travel behaviour and projected trends including population growth and predicted economic activity in the borough. Consideration of national and London wide targets is included, as is engagement with stakeholders.

The targets covering the period 2011/12 – 2013/14 are considered to be ambitious and realistic, given indicative funding levels and the projected growth in the Borough's population. Mandatory targets set by TfL include:

- Mode share
- Bus Service reliability
- Highway Asset Condition
- Road Traffic Casualties
- CO₂ Emissions.

The LIP2 also contains the following **Appendices**:

- Strategic Environmental Assessment
- Equality Impact Assessment
- Evidence Base
- Local Implementation Plan Funding Programme